

What is claimed is:

1. A method comprising:

providing a test sample comprising at least a fragment of a first subunit and at
5 least a fragment of a second subunit, the fragment of the first subunit and the
fragment of the second subunit capable of interacting to form a dimer and the
fragment of the first subunit comprising a fluorescent label;

measuring fluorescence polarization of test sample;

combining at least one test compound and test sample to form a test mixture;

10 evaluating fluorescence polarization of the test mixture; and

comparing fluorescence polarization of the test mixture with fluorescence
polarization of test sample to determine if the at least one test compound has
disrupted subunit interaction.

15 2. The method of claim 1 in which the fragment of a first subunit comprises a peptide
including SEQ ID NO.:1.

3. The method of claim 1 in which the fragment of the second subunit comprises a
protein which includes SEQ ID NO.: 2.

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4. The method of claim 1 wherein the at least one test compound includes a plurality of
test compounds.

5. The method of claim 1 in which the fluorescent label comprises pentafluorescein-
25 derivative Oregon Green 514.

6. The method of claim 1 in which the at least one test compound is a member of a
combinatorial library.

7. The method of claim 6 in which remaining members of the library are sequentially tested in a plurality of test mixtures.

8. A method comprising:

5 providing a test sample comprising a first fragment of a protein subunit bound to a second fragment of protein subunit, the first fragment of protein subunit comprising a fluorescent label;

measuring fluorescence polarization of a sample of the test sample;

10 combining at least one test compound and a sample of test sample to form a test mixture;

measuring fluorescence polarization of the test mixture;

15 comparing the fluorescence polarization of the test mixture to fluorescence polarization of the test sample, in which a decrease in the fluorescence polarization of the test mixture, when compared to the fluorescence polarization of the sample of test sample, indicates the first fragment is no longer bound to the second fragment.

9. The method of claim 8 in which the fragment comprises a peptide including SEQ ID NO.:1.

20 10. The method of claim 8 in which the second fragment comprises a protein including SEQ ID NO.: 2.

11. The method of claim 8 in which the fragment of a first fragment comprises a peptide including SEQ ID NO.:1 and the second fragment comprises a protein including SEQ ID
25 NO.: 2.

12. The method of claim 8 in which the fluorescent label comprises pentafluorescein-derivative Oregon Green 514.

14. A method of testing compounds for inhibiting herpes simplex virus DNA polymerase, the method comprising:

providing a test sample comprising a peptide which is substantially homologous to an eighteen amino acid C-terminal fragment of catalytic unit of herpes simplex virus DNA polymerase and a functional fragment of processivity subunit of herpes simplex virus DNA polymerase, the C-terminal fragment of catalytic unit of herpes simplex virus DNA polymerase comprising a fluorescent label;

measuring fluorescence polarization of the test sample;

combining at least one test compound and test sample to form a test mixture;

and

evaluating fluorescence polarization of the test mixture; and

comparing fluorescence polarization of the test mixture to fluorescence polarization of the test sample.

to determine level of inhibition of the herpes simplex virus DNA polymerase by the test compound by measuring fluorescence polarization of the test mixture.

15. The method of claim 14 in which in which a decrease in fluorescence polarization of test mixture, when compared to fluorescence polarization of test sample, can be correlated to a decrease in DNA synthesis by herpes simplex virus SNA polymerase.

16. The method of claim 15 in which the C-terminal fragment comprises a peptide including SEQ ID NO.:1.

17. The method of claim 15 in which the functional fragment of the processivity subunit comprises a protein including SEQ ID NO.: 2.

18. The method of claim 15 in which the C-terminal fragment comprises a peptide including SEQ ID NO.:1 and the functional fragment of the processivity subunit comprising a protein including SEQ ID NO.: 2.